Element 302 User Manual

Thank'you of purchasing this EamLab product. Who are dedicated to the policy of creating the highest quality audio components, are proud to introduce. You can be assured that in preparing this component, every attention was paid in great detail by our entire staff to strict quality control . This dedication was followed throughout the wole manufacturing process – from basic research, the selection of each parts, assembly and testing – so that we could supply a product with every confidence that it will give full owner satisfaction and pride.

We welcome you to the fast-growning Eam Lab circle of dedicated audio enthusiasts and true sound lovers

features

Element 302 is a big power amplifier capable up 900 Wm rms for channel at 2 ohm impedance.

Massive parallel output device combined with biggest and fast power supply guarantee a very high output driven current for difficult system speakers .

Innovative system protection via microprocessor make it very reliable and durable use of this amplifier.

Input stage with **HDCA** (High dynamic current amplifier) interface to better the various components of the audio chain by providing a sound exciting and free of stains.

The most important components equipped this product are entirely building in Italy under tight tolerance specifications.

The capacitors , power transformer and stainless chassis are designed for reduce vibration, the primary cause of a sound inhomogeneous.

The dual mono configuration generates a strong separation between the channels, creating a wider sound stage that focuses better the position of the instruments in the musical stage.

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WARNING: BEFORE YOU START TO USE READ AS FOLLOWS INFORMATION

Safety information :

1. For best performance, please read
this manual carefully.
Keep it in a safe place for future reference.
2. Install the unit in a cool, dry, clean place away from windows, heat sources, intense vibration, dust, humidity, cold, and sources of humming (transformers, motors, etc.).. To prevent fire or shock hazard do not expose the unit to water and moisture.
3. Never open the equipment. If something should get into all 'inside, contact your dealer.
4. Do not operate the switches and other controls with force. When moving the unit, first disconnect the power cord and cables connected to other devices. Never pull the wires themselves.

5. The openings of the lid provides adequate ventilation of the unit. In case of obstruction of the same, the temperature inside the rooms very quickly.
Then install the unit in a well-ventilated place, avoiding placing various objects in front of these openings to prevent fire and damage.Leave a space of at least 20 cm behind, 20 cm on both sides and 30 cm above the top panel of the machine to avoid fire or other damage.
6. The voltage used must be specified.
Using this product with a current whose voltage is higher than specified is dangerous and may cause fire or other damage. EAM LAB is not responsible for any damage due to an incorrect use of the appliance

Preparation

Unpacking :

Carefully remove from the box your Amplifier and keep the original carton and packing materials for future trips, expeditions or long-term storage.

Introduction :

first of all thank you for choosing our a power amplifier. Amplifier built on modern and reliable high construction standards and with high-quality components of the latest generation. Every model of HA is tested according to strict functional testing to ensure high reliability in all conditions and provide high performance sound unchanging for long periods of time. The 5 year warranty on every component that constitutes the amplifer is further proof of its reliability.
The high power available allows you to enjoy your music in full harmony without ever listening fatigue and dynamic compressions.

Precautions :

For the high power can be supplied to ensure that the speakers connected to it are able to withstand these powers worth the irreparable damage to speakers connected.

Before the installation :

remove your amplifier, taking care to keep it in the future if you ever require to be shipped to a service center EAMLAB to be overhauled or repaired.

Installation :

thanks to its ease of use, there are no particular notes of difficult interpretation. Before making any connections, make sure that the amplifier is turned OFF, preferably with the mains plug is disconnected to avoid unwanted random ignitions. Connect to the output terminals of the speaker cable of at least 2.5 sq mm cross section being particularly careful to observe the correct polarity to avoid unpleasant steps against acoustic ranging to compromising the overall noise. The section of the power cable that feeds the wall outlet where the amplifier must be connected to at least have a diameter of 2.5 mmq.

This is to ensure the amplifier always the right energy reserve when it is subjected to high dynamic musical passages.
It should be best to treat this aspect of the electrical installation if you intend to use the most of our amplifiers.

Function and protection

Ready to Power on

After making all connections correctly we are ready to turn on the amplifier.

You just made, the amplifier performs some set in the reset to ensure a safe operation, this is true both in power-on switch-off.

As sometimes happens the major problems of high power amplifiers take over at power on or power down.
Our amplifiers HA series are designed not to lie in this unfortunate situation.

Pressed the power switch on the front panel, the two LEDs **ILP**TM (see fig. A) will flash for about 3 seconds and then stay on steady. These LEDs indicate the operating status of the protections that serve different functions listed below:

ILPTM **(intelligent lock power):**

At Power on:
1 - connect the speakers out after about
3 seconds (delay antibump). The LEDs become fixed after about 3sec.

2- resets the parameters of current and voltage of the output stages to ensure maximum efficency

3- immediately disconnects the load in case of failure of the transistors

4 - disconnect the load in the event of a short circuit on the output stages

5 - disconnect the load in the event of a short circuit on the power cables

6 - disconnect the load in the event of prolonged clipping without damaging the speakers.

At the power off

1- immediately disconnects the outputs from the load

If the LEDs flash always:

In remote eventually that something can impair circuit **ILP**TM quickly intervene immediately disconnecting the load and blocking the amplifier. The LED or two LEDs (the 2 channels have 2 independent circuits ILP) will flash warning that something went wrong during the operation.

note: the circuit **ILP**TM also intervenes when the **DC** output offset should increase coming from the parameters set in the factory.

Proceed as follow :

turn the amp off and wait about 3 minutes to make sure that the circuit **ILPTM** resets every parameter. turn on the amplifier and observe the return to normal operation with LED ILP returning fixed.
if the problem persists (LED always blinking) contact a service center EAMLAB.

Note :
it may happen sometimes, after the intervention of the circuit **ILPTM**, which is switched on again, the LED or LEDs come back fixed but the amplifier does not emit any sound.

This means that the circuit **ILPTM** is working again and the relay circuit that releases the load does not detect the DC component in the output because the circuit **ILPTM** the block in advance if it detects abnormalities in the output stages.

Even in this case, contact the service center.

Instruction :

In any case, do not ever groped to solve the problem alone but contact the service center. Any unauthorized intervention immediately void the warranty.

THLTM ***thermal overload***

The thermal protection system **THLTM** is controlled with microprocessor . Thl is designed for maintain exercise temperature under 70° Celsius. Activated only in the case in which the operating temperature of the final stages exceeds the threshold of 100 °.

The intervention **THL** will be signaled by the fixed LEDs on the front panel (see fig.) these LEDs will light when the heatsink temperature reaches 70 ° and the circuit tries to keep it stable working on current values and polarization of the power stages.

When the temperature up 70° to 89° the led flashing with loop 1 second about . when temperature up to 90° THL provide to open output relays and limiting current on output stage for protecting circuit.
When temperature down to 80° amplifier realy turn on automatically and amplifier already for working.

NOTE: if temperature exceeed to 100° Celsius THL turn-off entirely power amp and turn on automatically when temperature return down 70°

Microprocessor for secure and effective protection :

The CPU control THL , soft start and entirely power supply for very high safety working.

Front pannel function

ILP : status led of protection or DC offset output

THL : status led of temperature control

Turn ON /OFF power amp

Stand-by led

Connection

Input XLR and single ended via RCA

Switch for input select : XLR or RCA

Left and **Right** output to connect speaker : **min. 2 Ohm**

General switch :

ON/OFF

Powercord and service fuse

Front pannel back light : ON/OFF

1 : Trigger control.

For turn ON/OFF amplifier with preamplifier remote control when trigger cable is interconnect

troubleshooting

problem	Possible cause	remedy
No power on	The plug on the power cord is not connected or is not fully inserted . The mains fuse is blown	Securely connect the plug or check the fuse on the rear panel next to the socket
No sound or sound very low	Connecting signal Input or output cables incorrect	Check the RCA or XLR cables . Swicth XLR/RCA incorrect position
Distorted sound	The source has an output signal too high or output amplifier clipping	Turn down the volume of the source if it is equipped with such control
THL light and amplifier no power output	Output relay open	temperature is in overload up to 90° . when down to 80° relay closed automatically
THL light and amplifier turn OFF	Temperature much to high	Temperature over 100° Celsius. Amplifier turn on automatically when temperature down 70°
Trigger interconnection no turn ON/OFF amplifier	Cable KO or source imcompatibilities	Check the cable or connect the cable to source and power amp
ILP led flashing	Output offset to much high or power final stage with problem	Turn off the machine. If the problem persists, contact an authorized service center

datasheet

Output power in Watt rms each channel driven 20 hz to 20khz	300 / 600 / 900 8 / 4 / 2 ohm
THD +N	0.03% full power at 8 ohm 1Khz
Signal to noise ratio	>105dB
Damping factor	200 at 150 Hz 8 Ohm
Input impedance	47 Kohm xlr / 25 Kohm RCA
Frequency response	5 hz to 80 Khz +/- 0.3db 80Khz to 150Khz +/- 4 db
Crest factor	20db
Input sensivity	1.3 Volt rms for full power 8 ohm XLR/RCA
Power consumption	**Stand-by :** 1W **Idle :** 30 W **Maximum**: 1800W
System protection	**ILP :** intelligent lock power **THL:** thermal heat limiting via CPU **PSS :** power soft starting via CPU
CMMR	>70 db
Channel separation	>80db
Circuit topology	AB class in dual mono configuration
Max voltage out (per channel)	58 Volt
Max current out (each channel)	40 Amper

Return Authorization Procedure

How to expedite service

If you believe there is a problem with your component, please contact your dealer, distributor, or the EamLab factory to discuss the problem before you return the component for repair. To expedite service, you may wish to complete and e-mail the Service Request Form in the Service section of our website at:

To contact EamLab service

www.eamlab.com

Tel. +39 0331 1836780

MAIL : support@eamlab.com

Website : www.eamlab.com

How to return a product

To return a product to EAMLAB, please follow this procedure so that we may serve you better: **1.** Obtain a Return Authorization Number (R/A number) and shipping address from the Krell Service Department. **2.** Insure and accept all liability for loss or damage to the product during shipment to the Krell factory and ensure all freight (shipping) charges are prepaid. The product may also be hand delivered if arrangements with the Service Department have been made in advance. Proof of purchase will be required for warranty validation at the time of hand delivery